



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 2  
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**MEMORANDUM**

**DATE:** June 26, 2000

**SUBJECT:** National Remedy Review Board Recommendations -  
Ciba-Geigy Superfund Site

**FROM:** John S. Frisco, Manager *John Frisco*  
Superfund Remedial Program  
EPA - Region 2

**TO:** Bruce K. Means, Chair  
National Remedy Review Board

I am writing in regard to the recommendations provided by the National Remedy Review Board concerning the proposed remedy for the Ciba-Geigy Superfund site in Toms River, New Jersey. In particular, the Board reviewed the region's preferred approach for dealing with the source areas at the site. The Board's recommendations were contained in your memorandum, dated June 21, 2000.

The source areas have been designated as such because they represent potential sources of groundwater contamination. A major feature of the proposed remedy is the biotreatment of approximately 145,000 cubic yards of contaminated soil. Some of the waste materials which cannot be effectively treated by this technology will be disposed of at appropriate off-site facilities including the estimated 35,000 intact drums buried in one of the source areas on the site. As part of the region's proposed remedy, some areas would be capped and institutional controls would be established to restrict the use of certain portions of the site property. The estimated cost of the remedial action is \$92 million.

As was indicated prior to and during the Board meeting, the Ciba-Geigy site has been the subject of extensive public participation over the years. EPA has long worked closely with the various stakeholders in an attempt to reach agreement on how to address the contamination problems at the site. These efforts resulted in the selection and implementation of the currently operating groundwater remedy. More recently, this process has produced a preferred approach for dealing with the contaminant source areas. The preferred approach has the full support of the potentially responsible party and the local community as illustrated in their position papers provided to the Board.

In the subject memorandum, it is noted that the site review package presented to the Board did not contain sufficient information to support the region's decision not to pursue a containment alternative. As a result, the Board recommends that the region more fully explain its position on containment along with the rationale for not developing an alternative for detailed evaluation including soil vapor extraction and/or other in-situ technologies in the decision documents for the remedial action.

There are a number of reasons why the region did not recommend on-site containment of the waste at Ciba-Geigy. Briefly, containment does not represent a permanent or effective solution to the problem. The waste in the source areas is highly concentrated and mobile raising serious concerns about the ability to reliably contain them over the long term. Much of this source area material would be defined as principle threat waste. Agency policy has long dictated a strong preference for the treatment of such material. Containment alone clearly would be inconsistent with this treatment preference. Although the cost to implement the remedial alternative proposed by the region is approximately 50 percent more than the containment alternative (i.e., Alternative 3), it is believed that the long-term advantages associated with a permanent remedy including treatment of the principle threat waste far outweigh this cost differential.

The Board also is recommending that the region explain why in-situ technologies such as soil vapor extraction were not considered. In fact, such technologies were considered during the development of the feasibility study. A nearly year-long study of SVE found the technology to be ineffective in achieving significant reductions in site contaminants. A full-scale SVE effort with thermal and mixing enhancements also was regarded by Ciba-Geigy as unsuccessful. Consequently, SVE was screened out relatively early in the feasibility study process and not carried forward for detailed evaluation.

The region did not specifically explore a combination of in-situ technologies like SVE and containment. In light of the earlier studies which found SVE to be ineffective, adding this technology to the containment alternative would increase the overall cost of containment with little if any benefit.

Aside from the above technical reasons, the community is strongly opposed to a containment remedy. Similarly, the potentially responsible party does not support such a remedial approach. The PRP conducted the feasibility study and has indicated both to EPA and the community its intent to implement the more effective bioremediation alternative even though it has a higher associated cost. Given these circumstances, along with our longstanding working relationship with the community, the region seriously doubts that any remedy based on containment of the waste could be successfully implemented at the Ciba Geigy site. In accordance with the Board's recommendations, we will better clarify our position on containment in the decision documents for the site remedy.

Lastly, in the memorandum, the Board notes that bioremediation has the potential to leave more residual contamination in the backfilled soils than thermal treatment and recommends that the region make sure that the community understands the tradeoffs between these two remedial technologies.

The region fully agrees with the Board's observation. Thermal treatment does provide a more predictable endpoint in terms of the residuals after treatment and would more effectively address the wide range of contaminants (including tentatively identified compounds or TICs) found at the site. As part of our public participation efforts, the region has held numerous meetings with the community throughout the feasibility study process to discuss potential remedial technologies. These included field visits to observe the operating thermal treatment process at the Industrial Latex Superfund site in northern New Jersey as well as the pilot-scale bioremediation field study at the Ciba-Geigy site itself. The advantages and disadvantages of the different technologies were discussed at length and, in particular, the tradeoffs between bioremediation and thermal treatment. Notwithstanding these apparent tradeoffs, the community still appears to prefer the biotreatment alternative.

The region has just released the proposed plan and will be accepting comments on the preferred alternative during a 60-day public comment period. The plan was released at a public meeting on June 15 and a follow-up public availability session was held on June 22. In addition, a public meeting is scheduled to be held in July to further discuss the specific remedial alternatives under consideration in more detail. Regional staff will continue to make every effort to ensure that the public fully understands all of the alternatives. For your information, widespread support for the bioremediation alternative was voiced at the recent public meeting and availability session.

The region very much appreciates the advice and recommendations of the Board in connection with the remedy for the Ciba-Geigy site.